THE EFFECTS OF ONLINE APPAREL PHOTO CODE COMPOSITIONS TO ENHANCE WOMEN'S PURCHASE INTENTION

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ABSTRACT

The shift in the socioeconomic structure towards the M-shape has given rise to a new consumer concept: affordable fashion. Thanks to the ultrahigh prevalence of the Internet access and handheld mobile devices, it has become a norm in modern consumer buying to browse and shop for apparel products or information quickly and easily online. Therefore, how to ensure that target consumer groups receive through visual communications precisely the messages that brands want to convey has become a key issue in today's e-commerce operation. This study summarized how components of product photos are combined and how these photos are laid out on the websites of seven affordable fashion brands from Taiwan and other countries and developed hypotheses based on the data from the case study analysis of these brands. The formal experiment was conducted using simulated webpages in combination with questionnaires to analyze product photos that combine the three visual codes: product, person and setting, and examine which of these can better stimulate mental simulations by participants in the four facets: 'participant's favorability towards characteristics of personal appearance', 'others' favorability towards characteristics of participant's appearance', participant's imaged actual 'occasion for wearing' and 'enhanced purchase intention'. 'Participant's frequency of online shopping use' was added as one of the variables in this study. It is found that heavy female users of online shopping are more influenced by product photos that combine 'a face showing model and an imagery-based setting' in the two facets of mental simulation: 'occasion for wearing' and 'enhanced purchase intention' while light users are more influenced by products photos that combine 'a face hiding model and an imagery-based setting'.

KEYWORDS: Affordable Fashion, Apparel Photo Code, Consumer Behavior, E-Commerce, Visual Design

Original Article

INTRODUCTION

Background and Objectives

In 2007, Japanese management and economics review pundit Kenichi Ohmae predicted the shifting trend towards the 'M-shaped society', a post-globalization social scene where the middle class will disappear altogether and the majority of people will become lower middle class, resulting in the existence of only two classes with increasingly stark contrast in the future. This phenomenon also heralds the arrival of extreme consumer buying patterns. One noticeable sphere is affordable fashion. This new consumer buying pattern has evolved into: offering affordable prices that allow consumers to gratify their luxurious tastes without having to pay high prices, thus breaking the barrier of upper class exclusivity (Bhardwaj & Fairhurst, 2010).

In addition, changes in information technology and global economic structure have led to the emergence of a new group of consumers characterized by lack of time and attention from 2000 onward (Lewis & Bridger, 2002). This new type of consumers relies on e-commerce systems with increasingly advanced technology for the

shopping pattern that requires rapid decision making. However, given to the competitive landscape in e-commerce and innovation of platform technology, how brands use 2D images and text messages to integrate visual design and layout on their online platforms is the key to attract consumer attention (Song & Schwarz, 2008) and a crucial factor that influences the decision to buy in the psychological process of online shopping consumers. In Taiwan's online shopping market 2010-2015, the apparel industry has the highest total output with affordable fashion brands being the most common approach to online platform operation, i.e. using both webpage layout and photo design with diversified combinations of apparel and a demonstrating model to ensure that consumers are fast caught up in the atmosphere with quick subsequent interest in and favor for buying (Huang & Ho, 2015).

One of the most important purposes of an online shopping site is to ensure that potential consumers can quickly find the information they need (Newman & Landay, 2000). The purpose of 'information design' is to enrich webpage contentintegrate different messages and place the integrated messages in the different units of a webpage framework for clear communication to users. This makes visual layout and design even more essential so that users can quickly receive information that is clearly presented and react to it when they 'see' websites at first glance.

Information flow in online shopping sites consists of pictures and text. In the situation where it is impossible to touch real-life products, presenting photos is the most direct way for online shopping platforms to touch the hearts of consumers. Consumer behavior researchers Elder & Krishn expounded in their study: the way products are presented in advertisements has a great influence on consumers through its persuading effect by encouraging mental simulations by consumers (Elder & Krishna, 2012); however, in consumer decision making behavior, situated cognition is an extremely complex process (Schwarz, 2006), and consumer purchase intention is influenced by hidden situational contexts. Most consumers like products that are easy to interact with mainly because they way consumers assess how they should interact with products is conditioned by product positioning and consumer background, i.e. depending on the fact that the settings visually presented by products are determined to be easy to manipulate and imagine (Eelen *et al.,* 2013).

According to the six facets model of effects in advertising, a good advertisement is designed by considering and planning the six facets: perception, emotion, cognition, association, persuasion and behavior (Moriarty *et al.,* 2011). As the basic starting facet in the facets model of advertising effects is 'perception', 'see' in perception was selected as the starting point for this study. The first step was to select the study base, including the four affordable fashion brands listed in 'Taiwan's Top 100 Online 2013' by the indicative digital magazine Business Next: lativ, OB Design, Queen Fashion Shop and PAZZO, as well as three global affordable fashion brands: ZARA from Spain, H&M from Sweden and Uniqlo from Japan, followed by an item analysis conducted on the apparel product images on the main product pages of these seven brands' online shopping websites. The purpose was twofold: finding all the influence factors and understanding how differently female consumers react at the perceptual level in the psychological process to the way today's mainstream affordable fashion brands present their product photos and visually compose their webpages The question that this study was intended to explore is: what effects product photos that combine different visual codes as components on affordable fashion apparel webpages have on enhancing purchase intentions among target consumers who are female office workers and university students aged 18-32 by prompting their mental simulations of the apparel products they are exposed to.

LITERATURE REVIEW

Affordable Fashion

The so-called affordable fashion, also known as fast fashion, refers to the apparel industry that, in response to

rapid market changes, needs to move apparel products rapidly from design through production to sale in two to three weeks, sell these products in limited quantities for limited time at lower prices and aim at maximum sales through impulse buying (Foroohar & Stabe, 2005). Affordable fashion can satisfy the need of consumers to possess different pieces of apparel quickly, obtain a variety of products at affordable prices and enjoy fashion at the earliest opportunity by paying reasonable prices (Bhardwaj & Fairhurst, 2010). Apart from playing the card of affordable prices, fashion brands use a quick and real-time response mechanism in which they make appropriate adjustments to their products in terms of style and quantity according to the current fashion movement to ensure the quickest response to consumer needs and some even go the extra length to make adjustment to their supply chains for smoother process operations in between (Barnes and Lea-Greenwood, 2007). This concept was first introduced by Fernie and Sparks in 1998. They argued that fast fashion consists of four elements: low predictability, predominantly impulse buying, shorter product lifecycle and high changeability of market needs. By shortening customer buying cycle and the to-the-market lead time for new products, it is possible to speed up the launch of products that meet consumer needs (Sull and Turconi, 2008). Today's global and representative affordable fashion brands, such as ZARA, H&M and Topshop that are popular in Europe, GAP in USA, UNIQLO in Japan and Lativ in Taiwan, are seeing their operations in the online shopping and mobile shopping markets gaining annually increasing share of their overall revenues in addition to their physical stores.

The part of affordable fashion online shopping platforms that corresponds to the two characteristics of affordable fashion, shorter lifecycle and impulse buying, is that interface design needs are reflected in the diversified combinations of large numbers of apparel products and apparel photos intended to stimulate and enhance the motivations for impulse buying. This is the main reason why this study explored from the perspectives of psychological process and visual design.

Codes in Apparel Product Photos

All advertising pictures consist of the three basic codes: product, setting and person, and the selection and proportion of the three codes can show different atmospheres and appeals, which in turn have different influences on consumers (Leiss *et al.*, 1997). The combinations of apparel and photos on online shopping platforms also consist of these three codes in the way that single apparel products, models wearing these clothes and the backgrounds behind the models in these photos represent the three codes of product, person and setting, respectively. Apart from apparel products, which represent one code, the two codes of person and setting in the photos are also the focus of this study and are described in detail below:

- **Person Code in the Combinations of Apparel and Photos**

Product demonstration by real-person models is the most important way of apparel demonstration. Slim models can better enable brands to make better impressions on consumers than their plump counterparts (Aagerup, 2011); in other words, the use of models that meet the ideal looks of women in the mind of consumers enables the fashion industry to evoke stronger positive response from consumers. However, Halliwell and Helga(2004) found that advertisements that include average-sized models also have positive influences on consumer attitudes and purchase intentions in relation to brands; and this may be because models who have similar figures to consumers look less out of reach to consumers, making them more willing to wear the clothes demonstrated by these models (Aagerup, 2011).

In addition, it is found in the photos of real-person models demonstrating apparel collected from affordable fashion apparel websites from Taiwan and other countries by this study between 2014 and 2015 that more and more online

shopping platforms for apparel deliberately avoid models' faces when taking their pictures and instead display the photo compositions that either only show the part below the neck or have the models hiding their faces with cameras; presumably because they want consumers to focus more on the apparel instead of models' faces and in turn reduce the influences of models' faces (pretty or ugly) on the persuasiveness of these photos on purchase intention. Therefore, the person code was further divided into 'face-showing person-based apparel demonstration' and 'non-face-showing person-based apparel demonstration' in this study.

- **Setting Code in the Combinations of Apparel and Photos**

Setting arrangement is a key to photo composition in fashion photography. Some experts (Chin, 2011) divide settings for portrait photography in online shopping photos into two categories (Fig. 1):

- **Imagery-Based Setting:** A certain setting or scenario is set up and furnished with an outdoor scene or studio props to create an atmosphere that matches the person and apparel to be photographed, e.g. sportswear in a sport setting and business wear in a hotel setting. Situational photography is about carefully designed storylines which products are woven into so that consumers receive advertising messages through their interest in the storylines (Guan, 2003)

- **Decontextualized Setting:** A simple solid color is used to set off a subject so that it becomes the visual focus and more attention can be drawn to apparel expression. The decontextualization approach allows a subject to be represented in a blank background instead of being represented as a specific object tied to a specific location and time

Figure 1(A): Example of an Imagery-Based Setting   1(B) Example of a Decontextualized Setting

(**Source:** Figure. 1(a): from Queen Fshion Shop, 2015; Figure. 1(b): from lativ, 2015)

Mental Simulation

A mental simulation can be regarded as a cognitive meaning in a hypothetical situation or the reproduction of a real life scenario, which includes the narration of a future event, the reliving or reconstruction of a past even, to be incorporated into factors in its hypothetical situation (Taylor & Schneider, 1989). Mental simulations can substantiate events and increase the formation of perceptions. They realize events, providing a way to deal with future uncertainty (Taylor *et al.,* 1998).

Before consumers make the decision to purchase, they are likely to use process-oriented mental simulations and focus on the process, method or situation in which they use the products (Escalas & Luce, 2003). The purpose of encouraging consumers to consider the process in relation to their needs while doing marketing is not only to enable consumers to better identify the information provided by product photos, but also to hopefully stimulate them to imagine the process in which they use the products and the steps in which they need to buy and use the products, thereby enhancing their behavioral intention to buy the new products.

METHODS

This study was divided into two stages. In the first stage, elements that fit the experimental sample design were sorted out by conducting an inductive analysis on the layout structures and contained product photos of the websites of the seven affordable fashion apparel brands: lativ, OB Design, Queen Fashion Shop and PAZZO from Taiwan and the global brands: ZARA, H&M and UNIQLO. In the second stage, product photos for the experiment and simulated webpages were created and experimental hypotheses that reflected the objective of this study were used to design a paper-based questionnaire, which was combined with the simulated webpages for surveying and analysis.

Study Base and Sample Size

Young women aged 18-30 were selected as the participants for the experiment. All of them had had experiences in shopping affordable fashion apparel on web platforms and had the habit of wearing dresses. The entire experiment was carried out over the period between March and May, 2015 by surveying the participants and individually guiding them to complete the paper-based questionnaire while browsing the simulated webpages. Among the 70 administered questionnaires in total, which excluded the pretest ones, 60 valid ones were eventually collected.

Variable setting

Table 1 summarizes a list of components in the photos from the websites of the seven Taiwanese and global affordable fashion apparel brands, which includes the basic components for product photos, i.e. the three codes: product, setting and person, conditions such as participant's frequency of online shopping use, the components and variables obtained from the second stage of the experiment, which were cross-combined to create samples to be surveyed in the experiment.

Table 1: Relationship between the Components in the Product Photos from Seven Affordable Fashion Apparel Websites and the Variables

	Model	Face	Setting	Participant's Frequency of Online Shopping Use
Variable 1	Yes	Shown	Situational	Heavy
Variable 2	No	Hidden	Decontextualized	Light

Consumers browsing online shopping sites for apparel will have different mental simulations after having seen product photos. According to the theory of fashion apparel buying published by O'Cass in 2004, apparel is a symbol of the wearer's psychological aspect. Therefore, this study had 'participant's identification with characteristics of personal appearance' and 'others' identification with characteristics of participant's appearance' as two dependent variables in terms of psychological factors. As mental simulations are simulated imaginations that target consumers have regarding the use of

products and results of such use after having received the messages that brands want to convey, 'simulated imagination of the actual occasion for wearing' and 'purchase intention' were the additional two dependent variables for the psychological process.

Product Photos and Simulated Webpages for the Experiment

All the surveys in the experiment used the simulated webpages in combination with a Likert five-point scale questionnaire. On the PC, the webpages containing the four types of photo combinations were presented in sequence, which included: A. face showing person + decontextualized setting, B. face hiding person + decontextualized setting, C. face hiding person + situational setting, and D. face showing person + situational setting. Fig. 2 is a schematic with screenshots of the four types of simulated webpages.

RESULTS

Influences of Mental Simulations by Participants after Having Seen Different Product Photos

This study sought to understand through a multi-factor analysis of variance whether there are significant differences in mental simulations of different facets after the participants have seen product photos that combine different elements.

Figure 2: Screenshots of the Four Types of Simulated Webpages, A, B, C and D for Testing

Table 2 shows that product photos presenting 'a model demonstrating apparel and showing the face in combination with an imagery-based setting' have higher average scores in all the facets of mental simulation. The analytical results also verify that the combination of 'a face showing model and an imagery-based setting' for product photos enables viewers to generate positive mental simulations, which enhance their and others' favorability towards the characteristics of the former's appearances and encourage the former to simulate and imagine the actual occasions for wearing.

There are slight differences only in the facet of 'enhanced purchase intention'. This study has found that product photos presenting 'a model demonstrating apparel but hiding the face in combination with an imagery-based setting' are the top scorers among all. In addition, product photos presenting 'a face showing model in combination with a

decontextualized setting' have the lowest scores in all the four facets of mental simulation.

Table 2: The Mental Simulation Status after Having Seen Different Product Photos

	Participant with Personal Appearance		Others with Participant's Appearance		Occasion for Wearing		Enhanced Purchase Intention	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Face showing, decontextualized	3.58	0.979	3.33	0.795	3.02	0.965	3.18	0.911
Face hiding, decontextualized	2.72	0.885	2.70	0.809	2.65	0.936	2.78	0.976
Face hiding, imagery-based	3.72	0.904	3.52	0.833	3.77	0.909	**4.08**	0.808
Face showing, imagery based	**3.95**	0.745	**3.90**	0.730	**3.83**	0.942	3.97	0.802
Significance	0.002*		0.104		0.135		0.020*	

On the other hand, the presentation effects of different combinations of 'face' and 'setting' all have significant influences on the two facets of mental simulation, 'participant's favorability towards characteristics of personal appearance' and 'enhanced purchase intention', but have no influences on the other two facets. Further verification was conducted in terms of pure main effects.

Influences of Frequency of Online Apparel Shopping on Mental Simulations after Viewing Different Product Photos

His purchase frequency of the participants in this study was determined based on six months as the classification criterion. A light user was defined as less than twice online shopping on average and a heavy user defined as twice or more online shopping on average. Among all the participants, 31 were light users, constituting 51.6% of the total and 29 were heavy users, constituting 48.3%. Therefore, 'frequency of online shopping use' was included as a factor that influences purchase intention. A two-factor mixed analysis of variance was used to understand whether frequency of online shopping use influences mental simulations after viewing product photos differently between heavy and light users.

Table 3: Analysis of Mental Simulations by Light and Heavy Users of Online Apparel Shopping After Viewing Product Photo Combinations (in Terms of User with Personal Appearance and Others With User's Appearance)

	User with personal appearance				Others with user's appearance			
	Heavy		Light		Heavy		Light	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Face showing, decontextualized	3.52	0.986	3.65	0.985	3.48	0.829	3.19	0.749
Face hiding, decontextualized	2.76	0.912	2.68	0.871	2.69	0.891	2.71	0.739
Face hiding, imagery-based	3.62	0.942	3.81	0.873	3.45	0.827	3.58	0.848
Face showing, imagery-based	**4.03**	0.823	**3.87**	0.670	**4.10**	0.673	**3.71**	0.734
Significance	0.577				0.123			

Table 4: Analysis of Mental Simulations by Light and Heavy Users of Online Apparel Shopping After Viewing Product Photo Combinations (in Terms of Occasion for Wearing and Enhanced Purchase Intention)

	Occasion for Wearing				Enhanced Purchase Intention			
	Heavy		Light		Heavy		Light	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Face showing, decontextualized	3.07	0.883	2.97	1.048	2.97	1.906	3.39	0.882
Face hiding, decontextualized	2.83	1.002	2.48	0.851	2.79	0.861	2.77	1.086
Face hiding, imagery-based	3.86	0.875	**3.68**	0.944	4.03	0.778	**4.13**	0.846
Face showing, imagery-based	**4.10**	0.772	3.58	1.025	**4.14**	0.743	3.81	0.833
Significance	0.534				0.095			

Test statistics in Tables 3 and 4 reveal no significant differences influences between all the compared variable combinations. Product photos presenting 'a model wearing apparel and showing the face in combination with an imagery-based setting' have the highest scores, with an average score of about 3.93 (the full score being 5), in the two facets of mental simulation, 'participant's favorability towards characteristics of personal appearance' and 'others' favorability towards characteristics of participant's appearance', regardless of heavy or light users.

Particularly noteworthy was that in the facets of 'occasion for wearing' and 'enhanced purchase intention', all the heavy users selected the form of 'a model demonstrating apparel and showing the face in combination with an imagery-based setting', which had the highest average of about 4.12; whereas the light users selected the product photos presenting 'a model wearing apparel but hiding the face in combination with an imagery-based setting', which was the top scoring component combination in the facet, with an average score of about 3.91. It was found that the light users almost all scored higher than the heavy users in this component combination for product photos.

CONCLUSIONS

Findings of this study reveal that product photos presented on webpages of affordable fashion apparel help enhance consumers' understanding of apparel products and can even encourage them to generate mental simulations, thereby enhancing their purchase intentions. Apparel product photos combined with 'an imagery-based setting' can best encourage consumers to generate mental simulations of occasions for wearing similar to the settings in the photos and can best enhance their purchase intentions.

Through this study, it can be found that the more comprehensive the content presented by product photos, such as the overall impression presented by apparel product photos with 'a model wearing apparel and showing the face in combination with an imagery-based setting', the easier it is for consumers to project the images presented by product photos to themselves, thereby scoring higher in mental simulation. However, one exceptional situation is that in the facet of mental simulation, 'enhanced purchase intention', the type of product photos presenting 'a model hiding the face in combination with an imagery-based setting' can better influence mental simulations generated by the participants than 'face showing' photos. The reason is presumably that hiding faces can prevent the participants from forming the stereotype that 'pretty models can wear anything better.' 'Face hiding' photos also prevent the participants from forming the perception that 'I probably cannot wear it as well as she' in relation to the models in the photos and encouraged them to simulate and imagine how they would like wearing the apparel. Therefore, these photos receive higher preference scores

from the participants. The type of photos presenting 'a model hiding the face in combination with a decontextualized background in solid color', although still able to present the complete look of apparel, fails to provide a setting or a model's face for viewers to imagine. This combination even evokes antipathy in some of the participants and consequently scores lower in all the four facets of mental simulation.

When heavy and light users of online shopping use are brought into play as intervening variables in this study, 'a model's face', when combined with 'a decontextualized setting', has different influences on mental simulations between both types of users. 'Face showing' can influence both types of users in the facet of 'user's favorability towards characteristics of personal appearance'. However, 'face hiding' influences the heavy users in 'occasion for wearing' and the light users in 'enhanced purchase intention'. Various forms of presenting the 'face', when combined with 'an imagery-based setting', all can influence both types of users in the facet of 'enhanced purchase intention'(Table 5).

Table 5: Comparison of the Influences of the Four Component Combinations for Product Photos

	Model's face	
	Face Showing	**Face Hiding**
Decontextualized Setting	The combination can enhance 'user's favorability towards the characteristics of personal appearance' in both types of online shopping users.	The combination cannot evoke mental simulations by both types of online shopping users in any of the facets because photo content provides too little information.
Imagery-based Setting	The combination can better enhance purchase intentions among heavy users of online shopping.	The combination can better enhance purchase intentions among light users of online shopping.

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